

PATENT

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| Applicant | : | Kim, Young-Jun | Confirmation No. 4124 |
| Application No. | : | 10/767,875 | |
| Filed | : | January 29, 2004 | |
| Title | : | METHOD OF PREPARING A NEGATIVE ELECTRODE FOR A RECHARGEABLE LITHIUM BATTERY, METHOD OF FABRICATING A RECHARGEABLE LITHIUM BATTERY AND A RECHARGEABLE LITHIUM BATTERY | |
| Grp./Div. | : | 1795 | |
| Examiner | : | Keith D. Walker | |
| Docket No. | : | 51813/P849 | |

APPELLANT'S REPLY BRIEF

Mail Stop Appeal Brief-Patents
Commissioner for Patents
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Alexandria, VA 22313-1450

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Pasadena, CA 91109-7068
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Commissioner:

In his answer to Appellant's Appeal Brief, the examiner argues that the presently pending claims are product-by-process claims by virtue of the limitation that "during charging of the rechargeable lithium battery a total amount of gas is generated." In arguing that this limitation is a product-by-process limitation, the examiner apparently states that *charging* the lithium battery is part of the process of *making* the lithium battery. Examiner's Answer, pages 4-5. This argument suggests that a step in the manufacture of a product can occur *after* the product is manufactured. Such an argument is not tenable. Once a product is manufactured, no further steps are required to make that product. Here, as charging can occur only *after* the lithium battery is made, charging is not a part of the process of *making* the battery. Indeed, the amount

Application No. 10/767,875

of gas generated by the battery during charging is a *property* of the battery, existing in the battery regardless of the process used to make the battery. As such, the property of gas generation is not a step in any process used to *make* the battery. As no process steps for *making* the battery are recited in the present claims, the battery and negative electrode are not claimed as a result of a process, as would be required by M.P.E.P. §2173.05(p) for characterization as a product-by-process claim. Accordingly, appellant maintains that the examiner's characterization of the claims as product-by-process claims is improper.

In responding to appellant's arguments regarding the rejection of the claims as allegedly anticipated by, or obvious over Idota (U.S. Patent No. 5,618,640), the examiner appears to argue that the passage in the Background section of Idota discussing the disadvantages of using a carbonaceous negative active materials, combined with the "well-known" practice of including a binder would lead to the claimed invention. However, Idota discloses the use of a binder only in combination with a metallic active material, and does not disclose combining a carbonaceous active material with an aqueous binder to form a battery that produces the claimed amount of gas upon charging. Moreover, although the use of a binder may be known to those of skill in the art, the use of a binder consisting essentially of a styrene-butadiene rubber and a cellulose-based compound in combination with a carbonaceous active material, as recited in the present claims, is nowhere taught or suggested by Idota. As neither the Background section, nor any other section of Idota teaches or suggest the combination of a carbonaceous material with the particular binder presently claimed, the present claims are not anticipated or obvious over Idota.

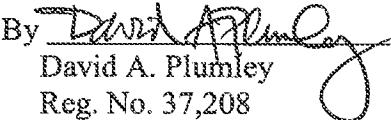
To address the gas generation limitation, the examiner asserts that the property of gas generation would be inherent in the product produced by combining a carbonaceous active material with a binder. However, as noted above, Idota fails to teach or suggest the combination of a carbonaceous negative active material with the recited binder, as presently claimed. As Idota fails to teach or suggest the claimed negative electrode and lithium battery, the product of Idota cannot inherently possess the recited gas generation properties. To establish inherency, the missing descriptive matter must be "necessarily present in the thing described in the reference." *Id.* at 745 (quoting *Continental Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1268, 20 U.S.P.Q.2d 1746, 1749 (Fed. Cir. 1991)) ("Monsanto"). Here, as Idota fails to teach or suggest the

Application No. 10/767,875

combination of a carbonaceous active material and the recited binder, the claimed gas generation properties are not *necessarily* present in the Idota product. Indeed, even assuming a similar product was disclosed, that product would not *necessarily* possess the claimed gas generation properties, as many factors contribute to those properties, including dispersion, the relative amounts of carbonaceous material and binder, and the relative amounts of the different components of the binder. As the Idota product does not *necessarily* possess the recited gas generation properties, that product does not inherently possess those properties. Therefore, the present claims are allowable over Idota.

Respectfully submitted,

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